CHAPTER 6. OPERATIONAL CONTROL

SECTION 5. FEDERAL AVIATION REGULATIONS PART 135 FLIGHT-LOCATING SYSTEMS AND OPERATING RULES

1253. GENERAL. This section contains direction and guidance to be used by inspectors concerning Federal Aviation Regulation (FAR) Part 135 flight-locating systems and operating rules. Inspectors should use this section with section 1 of this chapter when reviewing an operator's general operations manual (GOM) and when conducting inspections of FAR Part 135 operators.

1255. GENERAL REQUIREMENTS. Although FAR § 135.77 explicitly requires that each operator exercise operational control, the method by which an operator does so is not closely defined by the FAR. FAR Part 135 operations range from visual flight rules (VFR) operations in simple aircraft to extended overwater operations in highly sophisticated jet transports. FAR § 135.77 provides operators with the latitude necessary to design systems that fit the conditions surrounding the operations they conduct. Operators and principal operations inspectors (POI) must ensure, however, that each operator's system provides adequate control of the operation being conducted. Inspectors should be aware of the following requirements regarding operational functions:

A. *Formal Releases.* FAR Part 135 does not require operators to prepare a formal release authorizing a specific flight. FAR § 135.69 does require that the operator restrict or suspend operations when either the pilot-in-command (PIC) or the operator becomes aware of a hazardous condition. One acceptable means an operator may use to comply with this requirement is to use a formal release system.

B. *GOM Requirements.* The operator's GOM must contain adequate briefing and trip planning procedures to ensure that all safety requirements are fulfilled. POI's shall ensure that each operator's GOM contains detailed policies, conditions, and specific procedures for each category of employee responsible for the authorization or planning of a flight.

C. *Delegation of Authority.* FAR Part 135 operators commonly delegate the authority to PIC's for initiating flights. Such delegation has generally proven to be adequate for the operation of general purpose, single-engine and multiengine airplanes and helicopters in on-demand operations. Such systems may be inappropriate, however, for commuter operations, air ambulance services, jet transport operations, operations conducted beyond the contiguous states, extended overwater operations, and complex operations requiring extensive planning or coordination. POI's should strongly recommend that operators establish operational control systems that require the concurrence of an individual authorized to exercise operational control and the PIC for all flight release decisions. National Aeronautics and Space Administration (NASA) statistics show that police and air ambulance service operators who have adopted such systems have had significantly better safety records than operators of the same type who have not had such systems.

1257. FLIGHT-LOCATING SYSTEMS. FAR § 135.79 requires that each operator maintain a flight-locating system. The system must provide for the timely notification of an FAA facility or a search-and-rescue facility if an aircraft is overdue or missing. The operator's notification must be at least as prompt as notifications provided by FAA procedures and facilities.

A. *Flightplans Filed by PIC's.* FAR Part 135 operators may require PIC's to file and activate air traffic control (ATC) flightplans as one means of complying with FAR § 135.79. In this case, the operator's GOM must prohibit the PIC from operating without an activated flightplan until arrival at the destination airport. Operators may find that requiring the PIC to file a flightplan to satisfy the requirements of FAR § 135.79 precludes certain operations. For example, it is impractical for a PIC to conduct a flight to a non-controlled field by cancelling instrument flight rules (IFR) at the last radio navigation fix and then proceeding under VFR to destination on a VFR flightplan. ATC does not accept composite IFR/VFR flightplans. Normally, ATC will not activate a VFR flight on an air traffic control frequency. A PIC who cancels IFR and then changes to a flight-watch frequency to activate a VFR flightplan is not in compliance with FAR § 135.79. One acceptable means an operator may use to comply with FAR § 135.79 is to require the PIC to telephone the person exercising

operational control upon arrival at a destination not served by an ATC facility.

B. *Procedures in Lieu of Flightplans.* When an FAA flightplan is not filed, operators must have established procedures for following and locating each flight. The individual authorized to conduct operational control must be provided with at least the information required in a VFR flightplan.

C. *Flight-Locating Information When Radio Contact Cannot Be Maintained.* FAR Part 135 operators are not required to maintain the capability to contact flights while they are airborne. When operations are conducted in an area in which radio contact cannot be maintained with ATC, the individual authorized to exercise operational control must be provided with the location, date, and estimated time at which the PIC will re-establish radio or telephone communications. Flight-locating information must be retained at the operator's principal base of operations, or at other places designated by the operator, until the completion of the flight. Operators should maintain sufficient records to show compliance with these requirements.

D. *Flight Followers.* FAR Part 135 does not specify the qualifications or titles of individuals authorized to authorize or follow flights. FAR § 135.77 does, however, require the operator to list the name of each individual authorized to perform these duties in the GOM.

E. *Contractors.* FAR Part 135 operators may contract with other operators or organizations to perform direct operational control functions. The operator remains fully responsible for ensuring that the operations conducted comply with the FAR, the operator's GOM, and with safe operating practices. The name of each employee of the contractor authorized to perform operational control functions for the operator must be placed in the operator's GOM.

F. *Training.* Operators are responsible for ensuring that individuals authorized to exercise operational control are adequately trained to perform their assigned duties. One acceptable means an operator may use to meet this requirement is to establish a training and qualification program such as that described in chapter 5 of this volume.

NOTE: Individuals exercising operational control must be knowledgeable of, and have access to, appropriate sections of the operator's GOM while performing their assigned duties.

1259. FAR PART 135 FUEL-PLANNING REQUIREMENTS. The fuel-planning requirements of FAR Parts 91 and 135 are based on IFR and VFR Class I navigation within the contiguous states. Other types of operations or operations outside of the contiguous states may require additional or special planning.

A. *VFR Operations in Airplanes.* FAR § 135.209(a) prohibits takeoff in an airplane under VFR rules unless the airplane has enough fuel to fly to the airport of first intended landing. Thereafter the airplane must have enough fuel (computed at normal cruise) to either fly for 30 minutes during the day or for 45 minutes at night.

B. *VFR Operations in Helicopters.* FAR § 135.209(b) prohibits takeoff in a helicopter under VFR rules unless the helicopter has enough fuel to fly to the airport of first intended landing, and then to fly for 20 minutes at normal cruising fuel consumption.

C. *IFR Operations in Airplanes.* FAR § 135.223 prohibits takeoff in an airplane in IFR conditions unless the airplane has enough fuel to complete the flight to the airport of first intended landing. Thereafter, the airplane must have enough fuel to fly to the alternate airport, and then to fly for 45 minutes at normal cruise fuel consumption.

D. *IFR Operations in Helicopters.* FAR § 135.223 prohibits takeoff in a helicopter in IFR conditions unless the helicopter has enough fuel to complete the flight to the airport of first intended landing. Thereafter, the helicopter must have enough fuel to fly to the designated alternate airport, and then to fly for 30 minutes at normal cruise fuel consumption.

E. *Contingency Fuel.* FAR Part 135 does not specifically require a specific increment of contingency fuel. FAR § 91.103, however, does require that such contingencies be considered in preflight planning. Therefore, an increment of fuel to compensate for foreseeable contingencies must be on board for takeoff. One such contingency would be a delay in receiving takeoff clearance at major terminals. The operator's GOM should contain specific policies and instructions for computing the amount of contingency fuel to be carried under the circumstances likely to be encountered in the operator's specific operation.

F. *En Route Requirements.* The fuel planning requirements discussed in subparagraphs A through E apply for takeoff. FAR Part 135 does not specify the action the PIC must take if an alternate airport goes below minimums when the flight is en route, or how much fuel must be on board when the flight arrives overhead a destination or alternate airport. FAR § 135.69(b) allows a PIC to continue toward a destination when a hazard to safe operations may reasonably be expected to be corrected before arrival. FAR§ 135.69(b) does prohibit a PIC from continu-

ing a flight toward a destination, however, when the operator or the PIC knows of conditions that make continuation of the flight hazardous. The operator's GOM should contain specific policies and instructions on how the PIC is to proceed in foreseeable circumstances that may be encountered in the operator's specific operation.

1261. WEATHER REQUIREMENTS. FAR § 135.213 requires that weather reports and forecasts used in FAR Part 135 operations be prepared by the National Weather Service (NWS), a source approved by the NWS, or a source approved by the FAA (see section 1 of this chapter). Inspectors should ensure that FAR Part 135 operators are conducting operations in compliance with FAR weather provisions, as follows:

A. *VFR Operations.* A flight may not depart under VFR rules unless the ceiling and visibility en route are forecast to be above the applicable VFR minimums until the aircraft arrives at the destination airport.

(1) All available reports and forecasts must show that the flight can be completed in visual meteorological conditions. Available reports include pilot reports (PIREP's), which must be obtained and used when available.

(2) When there is no information available from an approved source, FAR § 135.213(a) authorizes PIC's to use their own observations or those of another competent person for operations under VFR. This authority is limited to only those situations in which a report from an approved source is not available. For example, these procedures might be appropriate for floatplane operations at remote lakes where no weather observer is stationed. This provision does not relieve PIC's and operational control personnel from obtaining and using the information that is available, such as area forecasts and PIREP's.

(3) The operator's GOM must specify the circumstances under which PIC's may use the provision of FAR § 135.213(a). If observers other than PIC's are used, operators must specify the training and qualifications of these observers.

B. *Point of Departure - IFR Operations.* A flight may not be originated when the weather at the departure point is below that specified in paragraph C57 or paragraph H106 of the operator's operations specifications.

(1) Takeoff weather minimums may be below the authorized landing minimums. For takeoff in such conditions, an alternate airport must be available, within 1 hour of flying time from the departure airport at normal cruise speed.

(2) Operators may be authorized to use "lower-than-standard" takeoff minimums by paragraph C57(e)(1) of the operations specifications. POI's, operators, and PIC's must be aware of the limitations associated with this authority. The operator must have an approved "lower-than-standard takeoff" training program and qualification module. The PIC (and second-in-command (SIC), when applicable) must have satisfactorily demonstrated competency on their last competency check (FAR § 135.293) or instrument proficiency check (FAR § 135.297). A single pilot may not conduct lower-than-standard takeoffs in weather conditions below Category I (CAT I) landing minimums.

C. *Destination Weather - IFR.* A flight may not depart under IFR or over-the-top rules unless appropriate weather reports or forecasts indicate that conditions will be at or above the minimums required by the operations specifications at the destination airport at the estimated time of arrival (ETA). The reports or forecasts used must be the most currently available at the time of takeoff. CAT I weather minimums are contained in paragraphs C53, C54, and H103 of the operations specifications. CAT II and CAT III minimums are listed in paragraphs C59, C60, H108, and H109.

D. *Designation of Alternate Airports.* FAR § 135.223 specifies when an alternate airport is required for IFR operations or over-the-top operations. An alternate airport does not have to be designated when, for at least 1 hour before and 1 hour after the ETA at the destination airport, the appropriate weather reports or forecasts (or any combination of them), show the ceiling will be as follows:

(1) At least 1,500 feet above the lowest circling MDA, if a circling approach is authorized for the airport; or

(2) If a circling approach is not authorized, at least 1,500 feet above the lowest published instrument approach minimum or 2,000 feet above the airport elevation, whichever is greater; and

(3) The visibility at that airport will be at least 3 miles, or 2 miles more than the lowest applicable visibility minimums, whichever is greater, for the instrument approach procedures to be used.

E. *Alternate Airport Weather.* The forecast weather at the designated alternate airport must exceed the requirements of the table in either paragraph C55 or paragraph H105 of the operations specifications, as applicable.

1263. IFR PASSENGER-CARRYING, OVER-THE-TOP OPERATIONS. FAR Part 135 contains a set of rules that limit IFR passenger-carrying, over-the-top flights. These limitations do not apply to cargo-only FAR Part 135 flights.

A. *Operation of Single-Engine Airplane and Helicopter Operations in IFR Conditions.* In general, FAR § 135.181 prohibits the operation of single-engine aircraft (either airplanes or helicopters) while carrying passengers in IFR conditions. FAR § 135.181(c)(2) only allows the following limited exceptions:

(1) A flight may depart in IFR conditions if VFR conditions can be reached within 15 minutes of departure. The flight may climb through an overcast to reach VFR on top conditions.

(2) An aircraft may be operated in IFR conditions and conduct an instrument approach when unforecasted IFR conditions are encountered and it is more prudent to continue in IFR conditions rather than remain in VFR conditions. POI's shall investigate reports of these incidents to ensure that IFR operations were more prudent.

NOTE: FAR § 135.181 does not prohibit a pilot from operating an aircraft in VFR conditions on an IFR clearance. An aircraft must be IFR-equipped and the pilot or pilots must be qualified according to FAR Part 135 before an IFR clearance may be requested or IFR weather conditions are entered.

B. *Operation of Single-Engine Aircraft in Over-The-Top Operations.* FAR § 135.181 prohibits the operation of single- engine aircraft (airplanes and helicopters) in over-the-top operations unless the following conditions can be met:

(1) The flight may be planned to climb to VFR over-the-top conditions as described in previous subparagraph A.

(2) If a ceiling exists, VFR conditions must be forecast to exist under the ceiling along the planned route from the time the flight begins operating over-the-top until 1 hour after the flight is estimated to reach the destination.

(3) At all points along the route, upon reaching destination, and for 1 hour thereafter, the forecast must show that the flight will be able to descend in VFR conditions (clear of clouds), should an engine fail.

C. *Operation of Multiengine Aircraft in IFR, Over-The-Top, Passenger-Carrying Operations.* A multi-engine aircraft (airplane or helicopter) may be released for IFR or VFR over-the-top, passenger-carrying operations under the following circumstances:

(1) The flight may be operated under the conditions described in subparagraphs A and B, or;

(2) The operator may limit the takeoff weight so that the aircraft can climb at 50 feet per minute at the MEA of the route to be flown or at 5,000 feet MSL, whichever is higher, with the critical engine inoperative. Passenger-carrying, multiengine helicopters flying offshore may be started when the helicopter can climb at 50 feet per minute at the MEA or at 1,500 feet MSL, whichever is higher, with the critical engine inoperative.

(3) A flight may start when weather forecasts and reports indicate that the flight will be able to operate in VFR conditions until it reaches the destination and then descend in VFR conditions to beneath the ceiling. Conditions at the destination must allow a VFR descent for the period of the ETA to 1 hour after ETA. While operating over-the-top, the flight must be able to comply with subparagraphs (1) or (2).

(4) A flight may start when it can be operated clear of the clouds until it reaches the final approach fix at the initial approach altitude under VFR conditions and then conduct an instrument approach.

1265. OVERWATER, PASSENGER-CARRYING OPERATIONS. Except for takeoffs, landings, and operations within gliding distance of land, all passenger-carrying flights operated over water must be operated as follows:

A. *Airplanes.* Operators must limit the takeoff weight of an airplane so that it can climb at 50 feet per minute at an altitude of 1,000 feet above the surface with the critical engine inoperative.

B. *Helicopters.* Helicopters must be equipped with flotation devices.

1267. FAR PART 135 EXTENDED OVERWATER OPERATIONS. Although FAR Part 135 does not specifically address the requirements for extended overwater operations, FAR § 135.21(a) requires that each operator develop a manual establishing the policies and procedures for operations that are acceptable to the FAA Administrator. One means, but not the only means, that a FAR Part 135 operator may use to develop acceptable extended overwater operations procedures is to show compliance with those portions of FAR Part 121 that correspond to the operation conducted.

A. *Flight Planning and Navigation.* Flight planning and navigational requirements do not differ from

those of Part 121 operators conducting operations in the same airspace (see sections 1 and 4 of this chapter and section 8 of chapter 8 in this volume).

B. *Fuel Planning.* The operator must provide adequate procedures for compensating with the limitations of forecast winds. One acceptable means an operator may use is to comply with the requirements of FAR § 121.641 for reciprocating or turbopropeller aircraft and with the requirements of FAR § 121.645 for turbojet aircraft. These FAR provide for appropriate en route reserves.

C. *Engine-Out En Route Performance Limits.* The operator must develop procedures to comply with the engine-out performance limitations of FAR Part 135, Subpart I. The operator's analysis must show compliance at the most critical point on the route. Under most conditions, engine-out operations require driftdown procedures. Inspectors must ensure that the operator's analysis considers how oxygen and aircraft systems are affected by engine loss (see volume 4, section 3).

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